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ABSTRACT

This report focuses illustratively on two institutional concerns for which changes in the aptitude level of entering students may have implications-attrition and grading. Implications indicated that colleges, individually and collectively, need to develop systematic programs for monitoring the incidence and determining the etiology of attrition. Findings point up the need for defining and using criteria or standards of student accomplishment and achievement which will permit evaluations that are independent of current class norms. A five-item bibliography is included. (MJM)

ED 074913

CRC center notes on institutional research

Vol. 1 No. 2 December 1972 Princeton, N. J.

DESPITE TRADITIONAL INSTITUTIONAL PRACTICE TO THE CONTRARY, institutional-educational research, evaluation, and self-study should be perceived as continuing processes, and implemented accordingly. Colleges are dynamic institutions, with changing clienteles, inputs, outputs, educational arrangements, resources, needs, and objectives. They should be able, at any time, to ascertain their current status on such variables, relative to their own past status and the current and past status of other colleges.

CRC at ETS BELIEVES THAT THIS STATE OF AFFAIRS CAN BEST BE REALIZED THROUGH A PROGRAM OF INTER-INSTITUTIONAL COOPERATION, jointly planned with central coordination, in which colleges agree to (a) introduce certain common patterns of data collection, evaluation, and testing as facets of regular institutional practice, and (b) develop policies, and help sustain mechanisms, for pooling centrally and sharing comparable data for evaluation and planning.

COLLEGES PARTICIPATING IN CRC'S PROGRAM HAVE ADOPTED PROCEDURES FOR COLLECTING COMPARABLE DATA in a variety of areas. All colleges use a standard, multipurpose survey with each entering class. Annual surveys of seniors provide data on students' postgraduate-study and career plans; their opinions on perennial or novel educational or societal questions; their assessments of various aspects of college life, and other matters. And, the colleges pool not only the data from surveys, but also data on student progress (e.g., grades, graduation-attrition rate, senior-level achievement on standard tests, etc.).

THESE ARRANGEMENTS HAVE PROVIDED INTERINSTITUTIONAL PERSPECTIVE for data interpretation, and they have had the continuity required to assure critically important time perspective for monitoring trends in the basic institutional variables under consideration.

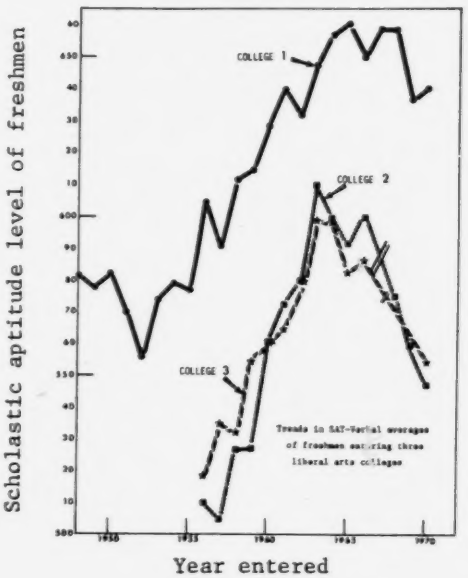
RELIABLE INFORMATION ABOUT TRENDS IN INSTITUTIONAL VARIABLES contributes not only to a fuller appreciation of the dynamic nature of a college (and of the corresponding need for continuous assessment), but also to better-informed evaluation of institutional practices and problems.

FOR EXAMPLE, THE ACADEMIC APTITUDE LEVEL OF STUDENTS entering some colleges varied markedly between 1950 and 1970, increasing dramatically during the 1950's, peaking in the mid-1960's, and stabilizing or declining thereafter.

THIS ISSUE OF CENTER NOTES FOCUSES ILLUSTRATIVELY ON TWO INSTITUTIONAL CONCERNS for which changes in the aptitude level of entering students may have implications, namely, "attrition" and "grading standards."

Kenneth M. Wilson, Director, CRC at ETS

Colleges are dynamic institutions


Scholastic aptitude level of freshmen
COLLEGE 1
COLLEGE 2
COLLEGE 3
Trends in SAT-Verbal averages of freshmen entering three liberal arts colleges
Year entered

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❖LOSS OF STUDENTS THROUGH ATTRITION IS COSTLY FOR A COLLEGE. CONSIDERING THE AMOUNT OF TIME, ENERGY, AND MONEY SPENT IN THE RECRUITMENT-ADMISSION PROCESS, THE PROBLEM OF ATTRITION CANNOT BE IGNORED. NO COLLEGE CAN AFFORD TO BE COMPLACENT, FOR ONE ERA'S GAIN IN INSTITUTIONAL HOLDING POWER MAY NOT BE A PERMANENT LEGACY.

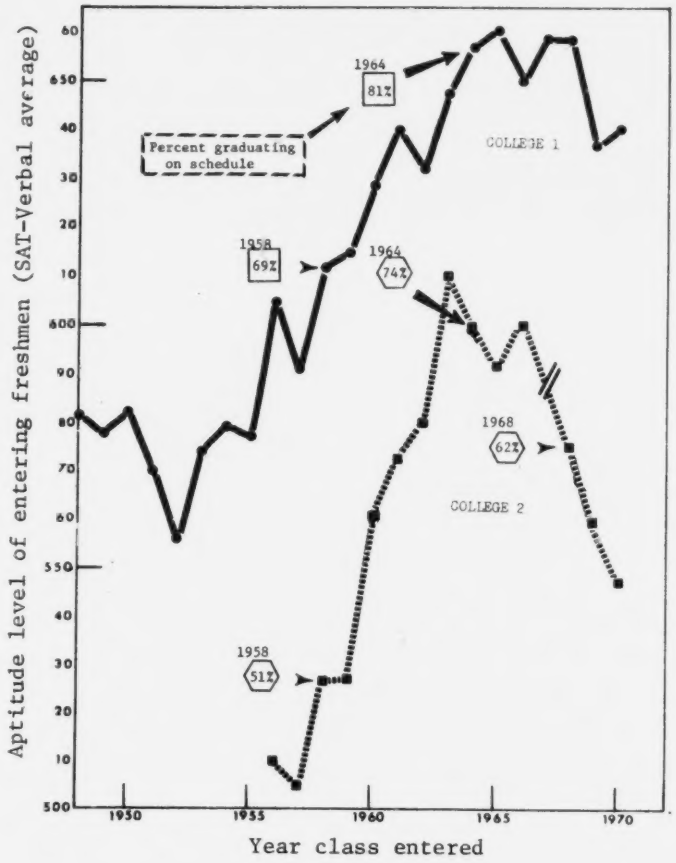
DURING A PERIOD OF ANNUAL INCREASES IN THE ACADEMIC QUALIFICATIONS OF THEIR ENTERING STUDENTS, Colleges 1 and 2 as well as several others studied by CRC, realized an improvement in their holding power--more objectively, fewer of their students withdrew officially.

FOR EXAMPLE:

- *At College 1, about 69% of the class entering in 1958 graduated, while 81% of the class entering in 1964 (and about 50 points higher on the SAT scale) did so.*
- *At College 2, about half (51%) of the 1958 entrants persisted through graduation, but almost three-fourths (74%) of the group entering in 1964 (and about 90 points higher on the SAT scale) did so.*

AT BOTH POINTS IN TIME, College 1, relatively more selective than College 2, had a higher graduation (lower attrition) rate. This is consistent with the general "predicting principle" that, at any given point in time, more-selective colleges tend to have lower attrition rates than less-selective colleges.

Aptitude levels and graduation rates for these two colleges went up together. Is there another side to the coin?



Attrition rate varies with college selectivity-level

Selectivity level	Definition (SAT V+M)	No. colleges	1966 entering freshmen not returning after 1st year: Men %	Women %
7	1236 +	9	5	6
6	1154 - 1235	15	8	10
5	1075 - 1153	24	13	12
4	998 - 1074	44	19	21
3	926 - 997	45	24	21
2	855 - 925	12	29	27
1	< 854	11	31	31
No estimate		20	19	32

Note: Data in this table are from Alexander Astin, "Recent Findings from the ACE Research Program: Implications for College Choice and Admission," College and University, Summer 1969, pp. 341-356.

ASTIN GROUPED 160 COLLEGES ACCORDING TO SEVEN SELECTIVITY LEVELS and reported the percent of 1966 freshmen not returning:

- *For colleges at the highest selectivity level, only about 5% of 1966 freshmen failed to reenroll for a second year, while for colleges at the lower end of the selectivity continuum, almost one-third of the freshman class did not reenroll.*

CRC FINDINGS INDICATE CLEARLY THAT COLLEGES MAY EXPERIENCE DRAMATIC CHANGES IN

"SELECTIVITY LEVEL" OVER A PERIOD OF YEARS, AND THAT GRADUATION-ATTRITION RATES ALSO CHANGE. Yesterday's statistics on both variables provide essential historical perspective, at both national and institutional levels, but historical perspective is useful primarily as a frame of reference for the evaluation and interpretation of today's data.

APTITUDE LEVELS AND GRADUATION RATES FOR SEVERAL COLLEGES WENT UP TOGETHER? WHAT IS ON THE OTHER SIDE OF THE COIN?

DATA SUPPLIED BY PARTICIPATING COLLEGES indicate that in several instances graduation rates for Classes entering after 1964 (the entering group which registered the highest graduation rate in recent years) are on the downswing.

> * *At College 2, for example, the graduation rate for the Class entering in 1968 (62%) was down from the high (74%) attained for the Class entering in 1964, though still considerably better than the graduation rate (51%) observed for the 1958 entering group.*
>
> * *At College 3 (see first page for trends in aptitude), 61% of the freshmen entering in 1964 graduated from the college of original registration, whereas only 51% of 1968 entrants did so.*

THE SAME GENERAL PATTERN HOLDS FOR THE APTITUDE LEVEL OF ENTERING CLASSES IN THESE YEARS. However, it is necessary to resist the temptingly simple conclusion that "students with higher ability persist, while those with lower ability drop out"--that the patterns which have been observed are a simple function of differences over time, and among colleges, in the recruitment of high-ability students.

> * *Over the years under consideration, withdrawing students at these colleges have been found to have better academic credentials than many of their persisting classmates. Few students are dismissed for academic difficulties, and departures from the college of original registration (COR) are largely self-initiated. Note also that Colleges 2 and 3 have had different graduation rates although their selectivity levels are comparable.*

WE MUST BOTH LOOK AT AND LOOK BEYOND "ACADEMIC ABILITY" in an effort to explain observed changes in graduation-attrition rate for a given college over time (not to mention differences among colleges on this variable).

IT SHOULD BE RECOGNIZED THAT TRADITIONAL PRESSURES TOWARD CONTINUITY OF ATTENDANCE AT ONLY ONE COLLEGE, "ENTERING AND GRADUATING WITH ONE'S CLASS," ARE TODAY BEING ATTENUATED. Various programs conducive to increased interinstitutional mobility are being introduced. For example, CRC colleges (and others) are participating in student interchange programs. While these may have the effect of reducing attrition by offering students a wider collegiate experience

without a severance of ties with their original institution, a general loosening of ties to only one college is implicit in such arrangements.

* *Many entering freshmen (74% in 1971) and seniors (88% in 1972) in colleges surveyed by CRC endorse the proposition that it would be educationally beneficial for students to attend more than one college.*
* *More than half the seniors surveyed in 1972 reported that they actually had attended more than one college.*

LEAVING THE COLLEGE OF ORIGINAL REGISTRATION (WITHDRAWING OFFICIALLY) is an option which students may exercise at their discretion, and one which a majority of them consider at one time or another, especially as freshmen or sophomores.

Students who actually withdraw from their college represent only the visible tip of an 'attrition iceberg.' CRC surveys reveal that a majority of continuing students consider the possibility of withdrawing from college.

College seniors' responses to a survey item	College B 1968 %	College A 1969 %	College F 1969 %	College H 1969 %	College G 1971 %	Five Colleges 1972 %
Have you at any time seriously considered withdrawing from [this college]?						
Yes, during freshman yr.	7	10	15	9	11	11
Yes, during soph. yr.	20	23	27	34	22	18
Yes, during junior yr.	6	8	10	3	12	6
Yes, during this year	3	1	-	-	2	2
Have thought of withdrawing but not seriously	36	28	21	32	25	31
Have never entertained idea of withdrawing	26	19	23	17	25	26
No response	2	11	4	5	3	6

* *More than a third (37%) of seniors surveyed in 1972 reported that they had given serious consideration to withdrawing at one time or another, while an additional 31% had considered doing so though not seriously.*
* *When it is realized that actual student attrition in these colleges currently ranges between 20% and 50%, these figures on incipient attrition make it clear that observed rates may be only the tip of an "attrition iceberg."*

AS THE CLIMATE FOR INTERINSTITUTIONAL MOBILITY BECOMES MORE FAVORABLE, students are more likely to view transfer to another college as a natural, nonthreatening option. Although very few of the able students who "leave" a selective college are likely to be "lost to higher education," they represent very real losses to the college of original registration, especially if the college does not attract its own replacement cohort of transfer students from other colleges.

EACH COLLEGE CONCERNED WITH ATTRITION MIGHT PROFITABLY RE-EXAMINE TRENDS IN ITS OWN ATTRITION-GRADUATION RATE over the past decade, in relation to trends in such theoretically relevant factors as college costs and general economic indicators; student mix (ethnic, geographic, socioeconomic, sex); parietal rules and social regulations; etc.

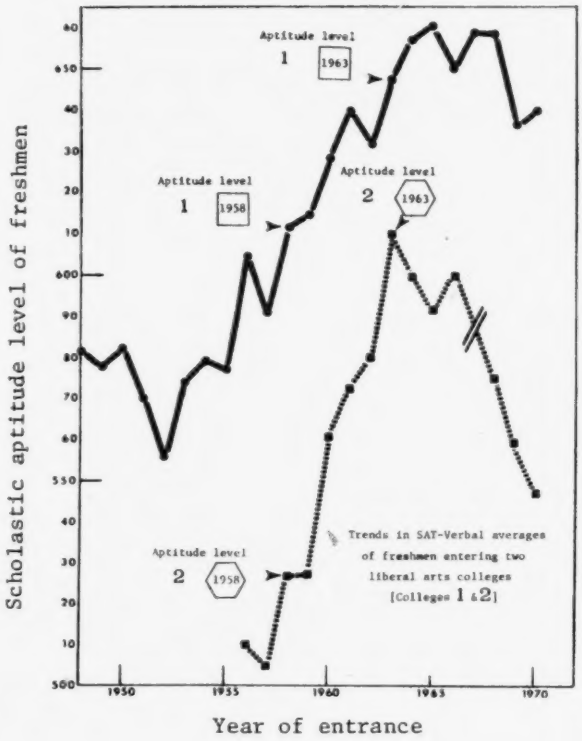
THE PROBLEM OF ATTRITION HAS RAMIFICATIONS FOR BUDGET, ADMISSIONS, COUNSELING, CURRICULUM PLANNING, HOUSING, AND MANY OTHER AREAS OF INSTITUTIONAL LIFE. IT IS SUFFICIENTLY COMPLEX TO CHALLENGE THE IMAGINATION AND THE RESOURCEFULNESS OF ALL CONCERNED WITH INSTITUTIONAL PLANNING AND DEVELOPMENT.

COLLEGES, INDIVIDUALLY AND COLLECTIVELY, NEED TO DEVELOP SYSTEMATIC PROGRAMS FOR MONITORING THE INCIDENCE AND DETERMINING THE ETIOLOGY OF ATTRITION. ❖

❖"GRADING IS ONE OF THOSE HORRIBLE ISSUES WHERE EVERYONE HAS A FAVORITE SYSTEM AND EVERYONE HAS A STRONG FEELING ABOUT IT. THERE IS NO CONSENSUS, NOT EVEN WITHIN THE RANKS OF HUMANISTS AND SCIENTISTS." *(Dean Horace Taft of Yale College, quoted in the NY Times, 9/24/72.)*

GRADING IS ONE OF THOSE 'HORRIBLE ISSUES' fraught with elements of intensely personal opinion. It is also an intrinsically complex issue with serious ramifications for students, professors, and institutions. And, both policy and practice with regard to the evaluation of student performance and the assignment of "grades" are being subjected to increasingly critical scrutiny by all concerned. Questions about the "meaning" of grades, and the rationales for assigning them, are "topical" on every college campus today.

Did the typical freshman in 1963 write better final exams than her predecessor in 1958?



IN THE FACE OF CHANGES IN THE AVERAGE ACADEMIC QUALIFICATIONS OF ENTERING STUDENTS, such as those shown in the figure, those concerned with "grades and grading" might well ask such questions as these:

- *In successive classes between 1950 and 1970, did freshmen at a given level of academic ability at entrance receive similar grades?*
- *Did "grading standards" change over the period 1958 to 1963? Were the changes, if any, planned or unplanned? What about the period 1964 - 1970?*
- *During these periods, did the "actual" academic productivity of students vary qualitatively or quantitatively in accordance with variations in their academic credentials? Did the typical freshman in 1963 turn in better-organized and -researched term papers, delve more deeply into the substance of her courses, or write better final examinations than her predecessors in, say, 1958 or 1952?*

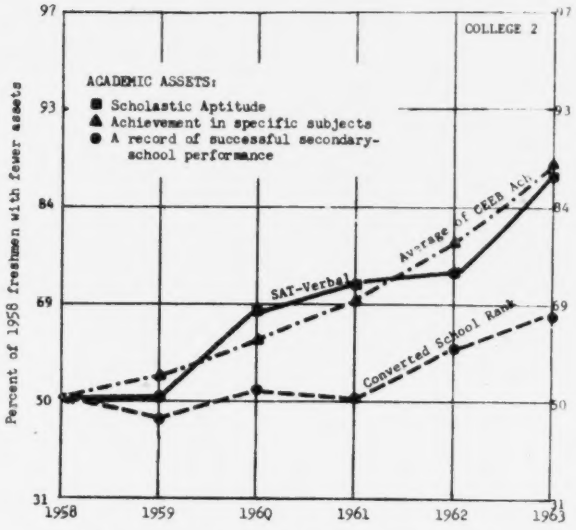
TENTATIVE ANSWERS TO SOME OF THESE QUESTIONS FOR SEVERAL COLLEGES, and some insight into the complexity of the problem of defining and assessing the 'appropriateness' of grading standards, are provided by studies of the level of freshman grades awarded by college faculties in relation to changes in the level of academic qualifications of students during the period 1958 - 1963.

FOR EACH COLLEGE, this period was characterized by annual increases not only in the scholastic aptitude scores of entering freshmen, but also in their measured achievement (average scores on CEEB achievement tests) and their school records (secondary-school rank-in-class).

TRENDS AT EACH COLLEGE WERE SIMILAR to those shown in detail for College 2, at which the typical freshman in 1963 presented higher SAT-Verbal and CEEB Achievement Test scores than almost 90 percent of her predecessors in 1958, along with a higher secondary school rank than over two-thirds of them.

IN ANY GIVEN YEAR, STUDENTS WITH CREDENTIALS LIKE THOSE OF THE TYPICAL 1963 ENTRANT EARN BETTER FRESHMAN GRADES, ON THE AVERAGE, THAN STUDENTS WITH CREDENTIALS LIKE THOSE OF THE AVERAGE FRESHMAN IN 1958.

Freshmen entering this college in 1963 had more academic assets to invest than those who entered the college in 1958, but . . .



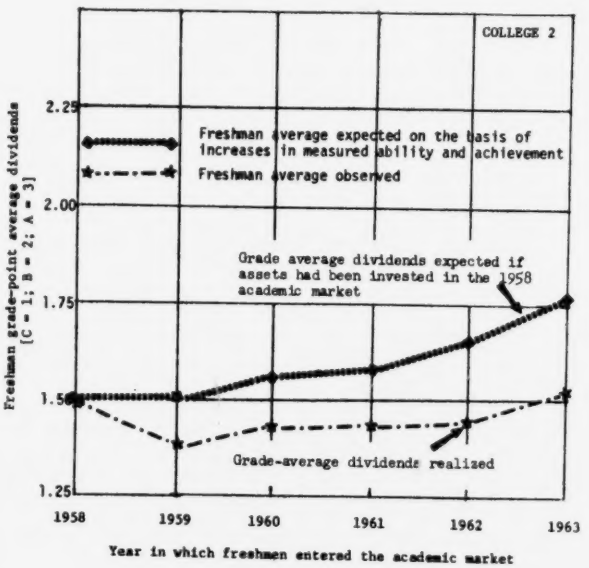
Year in which freshmen entered the academic market

KNOWING THE RELATIONSHIP BETWEEN GRADES AND ACADEMIC CREDENTIALS, we can determine for a given year the average level of freshman grades assigned by the faculty to students at a given level of aptitude and developed ability (i.e., with a given combination of scores on the admissions battery) *and thus operationally define a "grading standard," namely, "grade-level relative to ability-level" in that year. The figure below shows the average level of grades actually awarded in successive classes, 1958-1963, and the level at which these classes would have been graded if the 1958 "grade-level relative to ability-level" standard had been consistently applied throughout the period.*

WHAT DOES THE FIGURE TELL US?

- *The gap between the observed average and that expected on the basis of increases in student qualifications widened steadily.*
- *Despite having better qualifications, the typical 1963 freshman did not receive better grades than her 1958 predecessor.*
- *Given our definition of grading standard, these findings indicate that freshmen in 1963 were being graded according to a more stringent standard than that which was applied in 1958. Academic assets which would have yielded a dividend of "B-" in 1958, yielded only a "C+" in 1963.*

. . .it appears that the students who invested their assets in the 1963 academic market received lower grade-average dividends than those who had made similar investments in the 1958 market.



Year in which freshmen entered the academic market

IT APPEARS THAT FRESHMEN IN EACH ENTERING CLASS WERE GRADED IN TERMS OF THEIR PERFORMANCE RELATIVE TO CURRENT CLASS NORMS RATHER THAN IN TERMS OF INDEPENDENTLY DEFINED CRITERIA OR STANDARDS.

THUS, IN SEVERAL LIBERAL ARTS COLLEGES (College 2 and four others), the level of freshman grades did not change materially during one period (1958 - 1963) when these colleges were admitting better-qualified students each year. What has happened to freshman grades since the mid-1960's when the upward spiral of selectivity on academic variables levelled off and, in some instances, began a downswing?

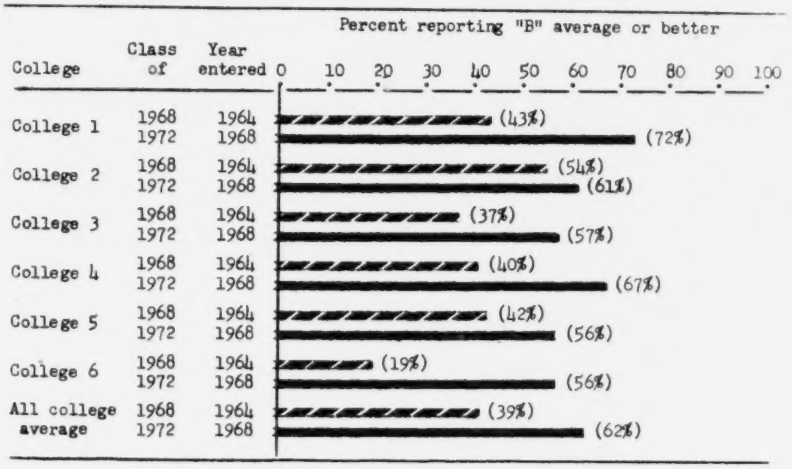
NO DATA ARE AVAILABLE ON FRESHMAN GRADES DURING THE PERIOD 1964 - 1971. However, other evidence provides reason to believe that the level of grades awarded may have increased during a period of stability or decline in student academic credentials [and traditional academic motivation as well (CRC NOTES, Vol. 1, No. 1)].

SURVEYS OF SENIORS, CONDUCTED IN 1968 AND IN 1972, PROVIDE SELF-REPORT DATA on the cumulative averages earned by members of the respective classes during college (percent earning C, C+, B-, etc.).

**Seniors graduating in 1972 reported higher cumulative college averages than were reported in 1968 by their predecessors.*

**In the Class of '72, at six colleges surveyed, 62% of senior women reported averages of B or better. Only 39% of the seniors surveyed in 1968 reported averages of B or better.*

Seniors in 1972 reported better 4-year cumulative grade point averages than those reported by seniors in the Class of 1968 at each of six colleges



JUDGING FROM THESE FINDINGS, some relaxation of standards, in the "grade-level relative to ability-level" sense, may have occurred since the mid-1960's, during years characterized by increasingly vocal expressions of student discontent at being graded in the traditional, competitive way.

IN BRIEF, THESE CRC findings strongly suggest that at several liberal arts colleges, grading standards have fluctuated over the past 20 years. Examination of grades awarded in relation to the level of ability of entering students, suggests that today's freshmen may be facing less stringent standards than their predecessors in 1963, but that today's standards, in turn, may be tougher than those of 1958 or 1950.

IT SHOULD BE CLEAR THAT THESE TENTATIVE CONCLUSIONS are based on what may be called "strong circumstantial evidence" requiring a chain of inferences and assumptions. For example, in concluding that the faculty grading standard was more stringent in 1963 than in 1958, we assume that the average differences in admissions credentials (scores) between 1963 and 1958 freshmen were associated with average performance differences *(as is known to be the case for comparable differences among groups of students within any given class)*, and that conditions of instruction and motivation were similar in both years. These are not unreasonable assumptions.

HOWEVER, OUR DATA DO NOT DIRECTLY ANSWER THE CRITICAL QUESTION as to whether or not the actual level of "student academic productivity or accomplishment" varied directly with the level of academic credentials over the years involved. Did the better-qualified freshmen in 1963 tend to "perform better" in the academic arena than their predecessors in 1958? If so, should they have received better grades?

SUCH QUESTIONS ARE NOT "MERELY ACADEMIC." The perspective which would be provided by comparing the academic products of "today's" students with those of students of five or ten years ago, would be valuable to any faculty concerned about the "meaning" of grades.

MORE GENERALLY, THESE CRC FINDINGS (AND SIMILAR FINDINGS REPORTED BY OTHERS) POINT UP THE NEED FOR DEFINING AND USING CRITERIA OR STANDARDS OF STUDENT ACCOMPLISHMENT AND ACHIEVEMENT WHICH WILL PERMIT EVALUATIONS THAT ARE INDEPENDENT OF "CURRENT CLASS NORMS." ❖

FOR ADDITIONAL INFORMATION AND PERSPECTIVE:

Alexander W. Astin, Jr., *"Recent Findings from the ACE Research Program: Implications for College Choice and Admissions,"* College and University, Summer 1969, pp. 341-356.

Leonard Baird and William J. Feister, *"Grading Standards: The Relation of Changes in Average Student Ability to the Average Grades Awarded,"* American Educational Research Journal, Vol. 9, No. 3, Summer 1972, pp. 431-442.

D. H. Ford and H. B. Urban, *"College Dropouts: Successes or Failures?,"* in L. A. Pervin, L. E. Reik, and W. D. Dalrymple (Eds.), The College Dropout and the Utilization of Talent, Princeton, N. J.: The Princeton University Press, 1966, pp. 83-106.

Kenneth M. Wilson, *"Increased Selectivity and Institutional Grading Standards,"* College and University, Fall 1970, pp. 46-53.

_____, *"Student Attrition: A Useful Focus for Institutional Inquiry,"* CRC Memorandum, 16 April 1970.

COLLEGE RESEARCH CENTER IS AN AGENCY FOR INTERINSTITUTIONAL COOPERATION IN INSTITUTIONAL RESEARCH. Supported from its inception by participating colleges and the College Entrance Examination Board, since 1970 CRC has been affiliated with and partially supported by Educational Testing Service. As an interinstitutional model, CRC assumes that colleges as a matter of enlightened self-interest should develop cooperatively and help support a programmatic pattern of data collection, surveys, tests, and evaluation procedures with (a) *sufficient commonality* to assure comparability of data from college to college, (b) *sufficient flexibility* to permit each college to meet unique needs and interests, and (c) *sufficient continuity* to provide critically important time perspective for the assessment of trends in basic institutional variables and their interrelationships.

CENTER NOTES SEEKS TO COMMUNICATE ABOUT INSTITUTIONAL RESEARCH AND RESEARCH FINDINGS TO COLLEGE FACULTY MEMBERS. Its goal is to increase the likelihood that findings of research, conducted by CRC and by others at ETS and elsewhere, will become part of campus discourse on the problems to which they are related, and not simply remain part of the research literature.

INQUIRIES ABOUT CRC ARE WELCOMED.

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